This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (original) A dental articulating device configured to duplicate at least a portion of a patient's mouth for use in producing a dental prosthesis, the device comprising:

a) a pair of trays, pivotally coupled together, the trays pivoting with respect to one another between:

i) a closed configuration, in which the trays are opposingly spaced-apart from one another; and

ii) an open configuration, in which the trays are pivoted away from one another; and

b) a hinge, integrally formed with the trays and positioned between the trays, including:

i) a pivot axle, associated with one of the trays;

ii) a shoulder, extending at least partially around the pivot axle and creating two axle portions extending on each side of the shoulder; and

iii) a pair of fingers, associated with another of the trays, pivotally positioned on opposite sides of the pivot axle and on opposite sides of the shoulder and separated by both the axle and the shoulder.

2. (original) A device in accordance with claim 1, further comprising:

a pair of arms, each extending between a different one of the trays and the hinge, and pivotally coupled together by the hinge.

3. (original) A device in accordance with claim 1, further comprising:

a) a pair of lower arms extending from a lower tray;

b) a pair of upper arms extending from an upper tray;

c) a pair of hinges, each disposed between a different one of the upper and the lower arms; and

d) the pair of hinges including a pair of pivot axles, the pivot axles being

collinear.

4. (original) A device in accordance with claim 1, wherein the pair of fingers slidably bear against the axle and the shoulder.

5. (original) A device in accordance with claim 1, wherein the axle is coupled to the tray by the shoulder.

6. (original) A device in accordance with claim 1, wherein the opposite fingers are curved and include a curvature oriented orthogonal to the pivot axle.

7. (original) A device in accordance with claim 6, wherein the hinge further includes:

a curved channel, circumscribing a portion of the pivot axle, and movably receiving one of the fingers therein.

8. (original) A device in accordance with claim 1, wherein at least one of the dental trays further includes:

a) an array of registration pin holes, formed in the dental tray, each configured to receive a registration pin; and

b) a thin membrane, extending across the registration pin holes and closing off the registration pin holes, the thin membrane being piercable by a registration pin when inserted into the hole.

9. (original) A device in accordance with claim 1, wherein at least one of the dental trays further includes:

registration struts having a hexagonal cross section.

10. (original) A device in accordance with claim 1, wherein at least one of the dental trays further includes:

a trough formed by a perimeter wall, the perimeter wall having a wavy profile with a plurality of arcuate indentations.

11. (original) A method for forming a dental model, comprising the steps of:

a) forming prepped and opposing models of prepped and opposing teeth on lower and upper trays of a dental articulator, the prepped model including a model of a prepped tooth to receive a dental prosthesis and the opposing model including a model of an opposite tooth opposite the prepped tooth; and

b) pivoting the lower and upper trays about a hinge integrally formed with the trays, the hinge including a first portion with a shoulder circumscribing an axle and a second portion with opposing fingers movably disposed on opposite sides of the axle and on opposite sides of the shoulder.

12. (original) A method in accordance with claim 11, further comprising the step of:

segmenting the prepped model on sides corresponding to the prepped tooth to form a prosthesis die.

13. (original) A method in accordance with claim 11, wherein the step of forming the prepped model further includes the step of:

positioning registration pins in registration pin holes in at least one of the trays, including positioning at least one registration pin at a location corresponding to the prepped tooth.

14. (original) A method in accordance with claim 13, wherein the step of positioning registration pins further includes the step of:

pressing the registrations pins through a thin membrane extending across the registration pin holes.

15. (original) A method in accordance with claim 11, wherein the step of forming the

prepped model further includes the step of:

disposing dental casting material over registration pin holes in at least one of the trays with a thin membrane extending across the registration pin holes to resist the dental casting material from substantially filling the registration pin holes.

16. (original) A method in accordance with claim 11, wherein the step of forming the prepped model further includes the step of:

disposing dental casting material around registration struts in at least one of the trays, the registration struts having a hexagonal cross section.

17. (original) A method in accordance with claim 11, wherein the step of forming the prepped model further includes the step of:

disposing dental casting material in at least one of the trays with a trough formed by a perimeter wall, the perimeter wall having a wavy profile with a plurality of arcuate indentations.

18. (original) A method for forming a dental model, comprising the steps of:

a) obtaining an impression of at least some of a patient's teeth, the impression including a prepped side with an impression of a prepped tooth to receive a dental prosthesis, and an opposing side with an impression of an opposing tooth opposing the prepped tooth;

b) disposing the impression between upper and lower trays of a dental articulator;

c) introducing dental casting material between the upper tray and the opposing side of the impression to form an opposing model of the opposing tooth;

d) introducing dental casting material between the lower tray and the prepped side of the impression to form a prepped model of the prepped tooth;

e) removing the impression from the dental articulator leaving the opposing and the prepped models on the respective upper and lower trays; and

f) pivoting the upper and the lower trays about a hinge integrally formed with the

trays, the hinge including a first portion with a shoulder substantially circumscribing an axle and a second portion with opposing fingers movably disposed on opposite sides of the axle and on opposite sides of the shoulder.

19. (original) A method in accordance with claim 18, further comprising the step of:

segmenting the dental casting material of the prepped model on sides corresponding to the prepped tooth to form a prosthesis die.

20. (original) A method in accordance with claim 18, further comprising the step of:

positioning registration pins in registration pin holes in at least one of the trays prior to introducing dental casting material into the tray, including positioning at least one registration pin at a location corresponding to the prepped tooth.

21. (original) A method in accordance with claim 20, wherein the step of positioning registration pins further includes the step of:

pressing the registrations pins through a thin membrane extending across the registration pin holes.

22. (original) A method in accordance with claim 18, wherein the step of introducing dental casting material further includes the step of:

disposing the dental casting material over registration pin holes with a thin membrane extending across the registration pin holes to resist dental casting material from substantially filling the registration pin holes.

23. (original) A method in accordance with claim 18, wherein the step of introducing dental casting material further includes the step of:

disposing dental casting material around registration struts in at least one of the trays, the registration struts having a hexagonal cross section.

24. (original) A method in accordance with claim 18, wherein the step of introducing dental casting material further includes the step of:

disposing dental casting material in a trough formed by a perimeter wall, the perimeter wall having a wavy profile with a plurality of arcuate indentations.

25. (original) A method for forming a dental model, comprising the steps of:

a) obtaining an impression of at least some of a patient's teeth, the impression including a prepped side with an impression of a prepped tooth to receive a dental prosthesis, and an opposing side with an impression of an opposing tooth opposing the prepped tooth;

b) obtaining a dental articulator with upper and lower trays pivotally coupled together by a hinge integrally formed with the trays, the hinge including a first portion with a shoulder substantially circumscribing an axle and a second portion with opposing fingers movably disposed on opposite sides of the axle and on opposite sides of the shoulder;

c) disposing dental casting material on the upper tray and in the opposing side of the impression;

d) disposing the opposing side of the impression over the upper tray so that dental casting material extends therebetween and forms an opposing model of the opposing tooth;

e) positioning registration pins in registration pin holes in the lower tray, including positioning at least one registration pin at a location corresponding to the prepped tooth;

f) disposing dental casting material on the lower tray and in the prepped side of the impression;

g) disposing the lower tray over the prepped side of the impression so that the dental casting material extends therebetween and forms a prepped model of the prepped tooth; and

h) removing the impression from the dental articulator.

26. (original) A dental articulator device, comprising:

a) a pair of trays, pivotally coupled together; and

b) a hinge, pivotally coupling the trays, including:

i) a pivot axle, integrally formed with the one of the trays;

ii) a grip, integrally formed with the another one of the trays and pivotally coupled to the pivot axle.

27. (new) A dental articulator device, comprising:

a) a pair of trays, pivotally coupled together, the trays pivoting with respect to one another between:

i) a closed configuration, in which the trays are opposingly spaced-apart from one another; and

ii) an open configuration, in which the trays are pivoted away from one another;

b) a hinge, pivotally coupling the trays; and

c) a posterior stop rod, couplable to one of the trays and extendable to the other at a position proximate the hinge and in-line with the trays.

28. (new) A device in accordance with claim 27, further comprising:

a hole, formed in one of the trays, with the posterior stop rod disposable therethrough.

29. (new) A dental articulator device, comprising:

a) a pair of U-shaped trays, movable with respect to one another between:

i) a closed configuration, in which the trays are opposingly spaced-apart from one another; and

ii) an open configuration, in which the trays are away from one another; and

b) at least one of the U-shaped trays being open through a middle of the U-shape.